

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-18304-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 05.11.2021

Date of issue: 25.04.2022

Holder of certificate:

Böllhoff Verbindungstechnik GmbH
Physikalisch-technisches Prüflabor
Archimedesstraße 1-4, 33649 Bielefeld

Tests in the fields:

mechanical-technological tests, metallographic tests, surfaces- and dimensional checks at fasteners from metallic material;
analysis of low- and alloyed steels using spark emission; salt spray test

Within the scope of accreditation marked with *), the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

The testing laboratory maintains a current list of all testing procedures within the flexible scope of accreditation.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories. Laboratories that conform to the requirements of this standard, operate generally in accordance with the principles of DIN EN ISO 9001.

*The certificate together with the annex reflects the status as indicated by the date of issue.
The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de/en/content/accredited-bodies-dakks>.*

Abbreviations used: see last page

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This document is a translation. The definitive version is the original German annex to the accreditation certificate.

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1 Mechanical-technological and mechanical tests *

1.1 Tensile, head impact and test force tests

DIN EN ISO 898-1 2013-05	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread (here: <i>Chapter 9.1 - Diagonal pull test on finished screws (no studs)</i> <i>Chapter 9.2 - Tensile test on finished bolts to determine the tensile strength R_m</i> <i>Chapter 9.3 - Tensile test on whole bolts to determine the elongation at break A_f and the 0.004 8 d yield strength R_{pf}</i> <i>Chapter 9.4 - Tensile test for bolts with reduced load capacity due to head design</i> <i>Chapter 9.5 - Tensile test for expansion shank bolts</i> <i>Chapter 9.6 - Test force test on finished bolts</i> <i>Chapter 9.7 - Tensile test on turned specimens</i> <i>Chapter 9.8 - Head impact test)</i>
DIN EN ISO 898-2 2012-08	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 2: Nuts with specified property classes - Coarse thread and fine pitch thread (here: <i>Chapter 9.1 - Test force test</i>)
DIN EN ISO 6892-1 2017-02	Metallic materials - Tensile testing - Part 1: Method of test at room temperature (here: <i>Procedure B - Test speed based on voltage speed</i>)
DIN EN ISO 6892-2 2018-09	Metallic materials - Tensile testing - Part 2: Method of test at elevated temperature

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1.2 Hardness tests

DIN EN ISO 898-1 2013-05	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread (here: <i>Chapter 9.9 - Hardness test</i>)
DIN EN ISO 898-2 2012-08	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 2: Nuts with specified property classes - Coarse thread and fine pitch thread (here: <i>Chapter 9.2 - Hardness test</i>)
DIN EN ISO 2639 2003-04	Steels - Determination and verification of the depth of carburized and hardened cases
DIN EN ISO 6507-1 2018-07	Metallic materials - Vickers hardness test - Part 1: Test method

1.3 Torque tests

DIN EN ISO 2320 2016-05	Fasteners - Prevailing torque steel nuts - Functional properties (here: <i>Chapter 9.3 - Clamping torque test</i>)
DIN EN ISO 898-5 2012-09	Mechanical properties of fasteners made of carbon steel and alloy steel - Part 5: Set screws and similar threaded fasteners with specified hardness classes - Coarse thread and fine pitch thread (here: <i>Chapter 9.4 - Determination of the torsional strength of setscrews with hexagon socket and hexalobular socket of hardness class 45H</i>)
DIN EN 20898-7 1995-04	Mechanical properties of fasteners - Part 7: Torsional test and minimum torques for bolts and screws with nominal diameters 1 mm to 10 mm
DIN 267-27 2009-09	Fasteners - Part 27: Steel screws, bolts and studs with adhesive coating, Technical specifications (here: <i>Chapter 6 - Test procedure</i>)
DIN 267-28 2009-09	Fasteners - Part 28: Steel screws, bolts and studs with locking coating, Technical specifications (here: <i>Chapter 6 - Test</i>)
DIN EN ISO 16047 2013-01	Fasteners - Torque/clamp force testing

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2 Metallographical tests *

DIN EN ISO 898-1
2013-05

Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread
(here:
Chapter 9.10 - decarburization test
Chapter 9.11 - carburization test)

3 Surface and dimensional tests on fasteners made of metallic materials

3.1 Surface inspection *

DIN EN ISO 898-1
2013-05

Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread
(here: *Chapter 9.15 - Checking for surface defects*)

DIN EN ISO 898-2
2012-08

Mechanical properties of fasteners made of carbon steel and alloy steel - Part 2: Nuts with specified property classes - Coarse thread and fine pitch thread
(here: *Chapter 9.3 - Checking the surface condition*)

DIN EN 26157-1
1991-12

Fasteners; surface discontinuities; bolts, screws and studs subject to general requirements
(here: *Chapter 4.3 - Destructive test*)

DIN EN 26157-3
2004-10

Fasteners; surface discontinuities; bolts, screws and studs subject to special requirements
(here: *Chapter 4.3 - Destructive test*)

DIN EN ISO 6157-2
2004-10

Fasteners - Surface discontinuities - Part 2: Nuts
(here:
Chapter 4.2 - Nondestructive test
Chapter 4.3 - Destructive test)

DIN EN ISO 10484
2004-10

Widening test on nuts

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3.2 thickness *

DIN EN ISO 3497 2001-12	Metallic coatings - Measurement of coating thickness - X-ray spectrometric methods
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3.3 Dimensional check

V BVT Labor 7.1-12 Revision 0 2017-09	Thread testing with thread limit ring gauge and mandrel in the laboratory testing area
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V BVT Labor 7.1-09 Revision 1 2019-08	Geometric and visual test
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3.4 Gauge accuracy test *

DIN ISO 1502 1996-12	ISO general purpose metric screw threads - Gauges and gauging
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4 Analysis of low- and high-alloy steels - spark emission spectrometry

V BVT Labor 7.1-06 Revision 1 2019-08	Optical spark emission spectrometry (OES) to determine 20 elements in steel and iron materials
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5 Salt spray test *

DIN EN ISO 9227 2017-07	Corrosion tests in artificial atmospheres - Salt spray tests (Restriction: <i>here only neutral salt spray test</i>)
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Abbreviations used:

DIN	German Institute for Standardization e.V.
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
V BVT Labor	Quality management process instructions from Böllhöff Verbindungstechnik GmbH

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